

DESCRIPTIONS OF SOME NEW SPECIES OF
MARINE MOLLUSCA FROM AUSTRALIA.

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PLATE I.

Voluta Verconis, *spec. nov.* Pl. i., fig. 5.

Elongate-fusiform, spire turrated, short; aperture about two-thirds the total length.

Pullus hemispheric of two and a half smooth whorls; spire-whorls three and a half, the anterior ones angulated antemedially and nodosely-plicate on the angulation, extending to the anterior suture, but evanescent towards the posterior suture. Body-whorl with ten nodosities on the periphery, abruptly terminating plications, which occupy the median area; at about the anterior-fourth the suture commences to ascend on the penultimate whorl, finally attaining to the angulation; outer lip incrassated, but bevelled-off inside to a thin simple edge; columella with four plications.

The sculpture consists of axial linear grooves, hardly visible by the unaided eye, and transverse wavy-striæ; the latter occur on the spire-whorls and the shoulder of the body-whorl, and are visible only by the aid of a lense.

The colour is whitish, with intricate-linear fulvous markings; chesnut spotted around the posterior suture, and on the body-whorl also about midway between the angulation and the front.

Dimensions of two adult specimens in millimetres:—

	(1)	(2)	Mean ratio.
Total length ...	28	23·5	100
Length of aperture	18·5	15·5	66
Greatest width ...	11	9	38

Habitat.—Two adult specimens, as shown by the incrassation of the lip and its ascension on the spire, were taken alive by Dr. Verco, from 13 fathoms in Yankalilla Bay, St. Vincent Gulf; and a living adolescent example from 30 fathoms off Corney Point, Spencer Gulf. Two dead shells dredged in Investigator's Straits (*Zietz*, in S. Aust. Mus.); also one dead shell in 22 fathoms by Dr. Verco.

Affinity.—In its general characters this new species resembles a dwarf *V. Kreuslera*, Angas, being about one-third its size; from which it differs by its proportionately shorter spire (the ratio of

the total length to that of aperture in *V. Kreuzera* is 100 to 62), more angulated whorls, by the ascension of the anterior part of the body-whorl on the spire, and by its wavy-striated surface. The last character, which it has in common with *Voluta (Volutoncus) coniformis*, Cox, is very exceptional in the genus.

Columbella cominellæformis, *spec. nov.* Pl. i., fig. 8.

Shell elongately oval, moderately solid, shining, unicolorous (pellucid-white, rose, or purplish-brown); apex somewhat apiculate; pullus semicylindrical of two smooth whorls, the first very small, the second narrow and elongate. Spire-whorls four, strongly nodulose-plicate (nine or ten on the penultimate), spirally distantly linear-sulcate, and striated transversely; the two posterior whorls are subangulated.

The body-whorl has about two plications in its posterior part, which become evanescent in an alignment with the hinder angle of the aperture; the rest of the surface is without ornament, but is sculptured with striæ of growth and incised spiral lines, the latter passing into sulci separating depressed narrow ridges on the base.

Aperture narrowly subquadrate; canal short, everted; the outer lip has a blunt edge. The medial part of the body-whorl behind the aperture is slightly compressed and there is a slight tabulation at the suture, which produce a slight insinuation at the posterior angle of the aperture.

Dimensions.—Length, 10; breadth, 4.25; length of aperture, 5 mm.

Localities.—I have collected about a dozen examples in as many years, extending from Fowler Bay, St. Vincent Gulf, Cape Northumberland to Victoria.

This species has much the same build as *C. Smithii*, Angas, and *C. atrata*, Gould, but it is conspicuously different by its smooth body-whorl and nodulose plicæ, and is moreover a much larger shell.

Turbonilla crenulifera, *spec. nov.* Pl. i., fig. 2.

Shell elongately cylindrical, thin, translucent-white, regularly axially ribbed, without spiral sculpture; the ribs are slightly arched, broad, and are continued backwards as crenatures on the very narrow obtuse shoulder of the whorl.

Whorls, excepting the apical ones, six; the pullus is heterostrophe, with the apex transverse and exsert. The axial plicæ decrease in strength as they approach the anterior suture, and on the last whorl are almost obsolete. The aperture is quadrately oval, the columella has an inconspicuous fold.

This species has much the aspect of a *Parthenia*.

Dimensions.—Length, 5; breadth, 1.25 mm.

Localities.—Streaky and Fowler Bays in the Great Australian Bight.*

Ectorisma, *gen. nov.*

Etymology.—*Ectos*, outside; *ereisma*, support; having reference to the external ligament.

Type.—*Ectorisma granulata*, *spec. nov.*

Shell oval, thin, transparent, equivalve, inequilateral, slightly nacreous within; valves gaping behind; surface granulated.

Right valve with a small cuneiform cardinal tooth. Left valve, with an obsolete socket beneath the umbo; the posterior and anterior margins of the hinge-line, where overlapped by the right valve, simulate ridge-like lateral teeth, the development on the posterior side being very pronounced, whilst it is somewhat obsolete anteriorly. Ligament external, supported in the anterior part by a linear-lanceolate extension of the hinge-line.

Mantle open in front, mantle-margin without distinct sinus; siphons united, very short, encircled with cirri; foot conical.

This genus by its external ligament, thin and granulated test, and its gaping valves, is closely allied to *Pholadomya*; from *Neeromya* it differs by its dentition and closed valves. It has certain resemblances to *Poromya*, *Cryptomya*, and other related genera having an internal cartilage.

Ectorisma granulata, *sp. nov.* Pl. i., figs. 3, 3a.

Shell inequilateral, transversely oval-oblong, ventricose; anterior side rounded; posterior side longer, with a narrowed subtruncated margin; posterior margin slightly spreading to form a gape, 2 mm. at the widest, and about 6 mm. in length.

The umbos are large, transverse, approximate. Surface of valves ornamented with granules arranged in radial rows, the granulation is, however, more or less absent in the umbonal region, which is of a pearly lustre externally. There are 15 cirri surrounding the base of the united siphons.

Dimensions.—Antero-posterior, 15; umbo-ventral, 11; sectional diameter, 7.5 millimetres.

Locality.—Hardwicke Bay, Spencer Gulf; two living specimens dredged from 8 to 10 fathoms by Dr. Verco.

GENUS MYSELLA.

Mr. E. A. Smith, in *Annals and Mag. of Nat. Hist.*, 1891, p. 235, suppresses this genus by including it under *Tellimya*, Brown (usually regarded as a section of *Montacuta*); and at the

* Tasmanian examples have been submitted to me by Rev. H. T. Hull, who considers it identical with *Chemnitzia Beddomei*, Petterd.

same time overlooks the fact that I had already in 1887 * transferred the genus to the vicinity of *Montacuta*. Nevertheless, I am of the opinion that the details of the dentition are not identical in the two, and that *Mysella* should be retained.

The left valve has a relatively large, diverging, flattened tooth posterior to the triangular cartilage-pit; the anterior margin of the pit is thickened and margined to simulate a transverse tooth; in front of this is a small socket.

The right valve has the hinge-margin on each side of the umbo produced, which is overlapped by the hinge-line of the opposite valve; the posterior tooth-like edge interlocks above the cardinal tooth of the left valve, and the anterior, which is shorter, is received in the socket in front of the ridge-like edge of the cartilage-pit. These tooth-like margins of the right valve must be regarded as representing cardinal and not lateral teeth. I have failed to detect any trace of an ossicle, though I am not disposed to attach any particular value to its presence or absence.

Mysella ovalis, *spec. nov.* Plate i., fig. 7.

Shell thin, whitish or pale-horn coloured, pellucid, shining, ornamented with a few concentric ridges and intermediate striæ of growth; equivalve.

Valves transversely oval, sub-equilateral, depressedly convex; hinge-line arched, the anterior slope slightly incurved and shorter than the posterior slope, which is straight; anterior margin inconspicuously truncatedly-rounded, posterior margin more pointed; the ventral margin is moderately curved outwards. Umbos small, acute, approximate, antemedian.

Dimensions.—Antero-posterior diameter, 14·5; umbo-ventral diameter, 10; sectional diameter, 4·25; anterior radius, 6; posterior radius, 8·5.

A larger valve has the following diameters:—Antero-posterior, 15; umbo-ventral, 11·5.

Habitat.—Hardwicke Bay, two examples from ten fathoms, and Investigator Straits near Troubridge, two valves from 22 fathoms (*Dr. Verco*).

This third species differs from its congeners by its less inequilateral shape and by its rounded ventral margin, but approaches more to *M. anomala* than to *M. donaciformis*.

Lucina perobliqua, *spec. nov.* Plate i., fig. 10.

Shell thick, white, obliquely oval, subventricose, inequilateral; dorsal margin concave in front, nearly straight and rapidly descending behind; posterior margin truncatedly rounded; ven-

* Trans. Roy. Soc., S. Aust., vol. IX., p. 99.

tral margin strongly arched, roundly curving to the anterior margin.

Surface with close-set concentric striæ in the umbonal region gradually becoming linear sulci with increasing growth; towards the front margin the flat ridges do not exceed .5 mm. wide, but they are somewhat unequal in width. The anterior and posterior slopes are ornamented with narrow, slender, minutely crenulated, radial threads; the medial area is, however, obscurely radiately-lined. The right valve has two cardinal teeth and a lateral on each side, the left valve has one cardinal tooth and two laterals on each side.

Dimensions of a large example.—Antero-posterior diameter, 28; umbo-ventral diameter, 23; sectional diameter, 15 mm.

Habitat.—As a beach-specimens collected in South Yorke-Peninsula by Messrs. Matthews and McDougall. Numerous single valves dredged by Dr. Verco, from 15 and 22 fathoms in Investigator's Straits; and from 30 fathoms off Corney Point, Spencer-Gulf.

Affinities.—This species has been known to me for some years past, but as the condition of the specimens did not permit of detailed definition, it had been regarded tentatively as the senile stage of *L. Tatei*, Angas. Some of the specimens recently obtained by Dr. Verco permit a critical comparison to be made. In outline the new shell is more comparable with *L. obliqua*, Reeve, but that shell is decussated throughout with radial and concentric striæ. *L. Tatei*, which does not much exceed 8 mm. in the umbo-ventral diameter, is ornamented with linear raised concentric lines, with broad intervening furrows, tessellated by conspicuous radial ridges; whilst the umbonal portion of *L. perobliqua*, corresponding in area with a large valve of *L. Tatei*, is marked with close-set concentric striæ, and the lateral borders only with radial threads. As yet no examples of *L. perobliqua* have been obtained so small as the largest *L. Tatei*, but the smallest of them show an obliquity which is not presented by the latter.

***Lucina paupera*, spec. nov.** Pl. i., fig. 6.

Shell quadrately- and somewhat obliquely- oval, equivalve, very inequilateral, solid, dirty-white, very finely ridged concentrically; the concentric ridges very thin, inconspicuously elevated and distant, the interstices smooth; at about three-fourths to the front they become closer together and thicker; there is no trace of radial ornamentation.

The antero-dorsal margin is nearly straight, and rapidly descending; the post-dorsal margin is arched, and abruptly joins the much-rounded posterior margin; ventral margin considerably arched.

Umbones acute, incurved, approximate; the lunule is broadly lanceolate and shallow, each valve equally contributing to its formation; escutcheon very narrow and slightly depressed, with subangular margins.

Right valve with a cardinal tooth and an anterior lateral tooth; the posterior lateral is imperfectly developed. Left valve with two divergent cardinal teeth; there are no laterals. Inner margin of valves plain.

Dimensions.—Antero-posterior diameter, 11; anterior radius, 6·5; posterior radius, 4·5; umbo-ventral diameter, 10; sectional diameter, 6 mills.

Habitat.—Three miles off Rickaby, Hardwicke Bay, Spencer Gulf, in eight fathoms. One perfect shell (*Dr. Verco*).

This new species has much the outline of *L. quadrata*, Angas, though with a less arched antero-dorsal margin. The concentric ornamentation, the great inequilateral form and the simple dentition are associated characters, which give distinctness to this species.

***Cardita gemmulifera*, spec. nov.** Pl. i., fig. 9.

A single living specimen of a *Cardita* taken in company with *C. Beddomei*, in 17½ fathoms off Corney Point by Dr. Verco, differs sufficiently from that species to justify a distinctive denomination. The costæ are ornamented with close-set rounded tubercles in place of narrow transverse ones, and the sectional outline of the shell is slightly more tumid.

Dimensions.—Antero-posterior, 10; umbo-ventral, 9; sectional diameter, 6·75 mm.

***Lithodomus projectans*, spec. nov.** Pl. i., fig. 1.

Shell cylindrical-oblong; umbones tumid, involute, projecting beyond the anterior margin; somewhat narrowed posteriorly, without angulation, to the roundly-truncated margin; anterior margin rounded; post-dorsal margin strongly arched; ventral margin nearly straight, but slightly curved antemedially.

Test covered with a reddish-brown, thick, glossy epidermis, marked with a few linear sulci which pass into abrupt subimbricating folds on the posterior slope. Interior of a violet-brown colour.

Dimensions.—Antero-posterior diameter, 28; greatest transverse diameter, 12·5; sectional diameter, 12 (vix.).

Locality.—Port Darwin (*W. T. Bednall*).

This species is conspicuous by its projecting umbos and strongly arched dorsal line, in which particulars it resembles *L. cinnamomeus*, Chemnitz, from which it differs by its less arched dorsal line, straighter ventral margin and by the absence of *decussated sculpture*. It is referred to under *L. brevis*, Tate, Trans. Roy.

Soc., S. Aust., 1887, p. 186, as a near alliance to that fossil-species.

Lithodomus euneiformis, *spec. nov.* Pl. i., fig. 4.

Shell cuneately-oblong, without any posterior angulation, widest near front, attenuating rapidly to the narrow truncated and thickened margin; anterior side very short, truncatedly-rounded; ventral margin nearly straight, but slightly incurved about the byssal region and corresponding with an almost imperceptible depressed area, which descends with a backward inclination from the umbo. Umbos large, tumid, involute, approximate, nearly terminal, but not protruding beyond the vertical plane of the anterior margin.

Test, which is covered with a thick, brown, glossy epidermis, is marked with somewhat distant furrows, becoming on the posterior slope very prominent and subimbricate; the surface is otherwise smooth and without sculpture.

Dimensions.—Antero-posterior diameter, 17; umbro-ventral diameter, 8; sectional diameter through the umbos, 7.

Habitat.—Occupying crypts in a friable consolidated shell-ooze in eight fathoms, two miles off Port Victoria, St. Vincent Gulf; many examples (*Dr. Verco*).

This is a very distinct species on account of its shape and absence of radial sculpture, unless it may prove to be *Modiola pulex*, Lamarck, of King George Sound; the diagnosis of which is, however, so brief as not to be satisfactorily applicable to it.

Myrina crenatulifera, *spec. nov.* Pl. i., figs. 11, 11a.

Test rather thick, moderately inflated, obliquely truncate-oval very inequilateral, equivalve; covered with a thin, brown, glossy epidermis, which is raised into slender folds of growth. The umbones are prominent, inflated, approximate, incline-over towards the front, and are nearly terminal. The anterior outline is oblique, narrowly and regularly arcuate, interrupted only beneath the hinge-extremity by an inconspicuous byssal-sinus; the posterior side is more arched and regularly rounded to the obliquely semicircular ventral margin; the dorsal outline is straight. The hinge-line is broad, transversely plicated at both ends, the plications being interrupted by a ligamental groove, which descends obliquely from the umbo; there are about twenty plications on the anterior side, and about thirty posteriorly.

The interior is bluish-brown, and glossy, with a paler or white clouding circumferentially. The edge of the valves is slightly thickened, particularly in the post-dorsal margin, which is furnished with from four to six tooth-like crenatures—the terminations of radial ridges.

Dimensions.—Antero-posterior diameter, 2 mm.; dorsal-ventral diameter, 2 mm.; sectional diameter, 1.5 mm.

Locality.—In shell-sand, MacDonnell Bay; several examples (*Mr. A. Adcock*).

This little shell has rather the external form of *Crenella* than of *Myrina*, but as the ligamental pit is wholly excavated in the hinge, and not descending underneath it, as in the former, I refer it to the latter genus, which has hitherto been known in Australian waters only by one species—*M. Coppingeri*, E. A. Smith, Challenger Rep., from east of Cape York, in 1,400 fathoms.

EXPLANATION OF PLATE I.

Fig.

1. *Lithodomus projectans*. Nat. size.
 2. *Turbonilla crenulifera*. Enlarged 5 x.
 3. *Ectorisma granulata*. Left valve slightly enlarged.
 - 3a. *Ectorisma granulata*. Side view of hinge of right valve.
 4. *Lithodomus cuneiformis*. Slightly enlarged.
 5. *Voluta Verconis*. Slightly enlarged.
 6. *Lucina paupera*. Slightly enlarged.
 7. *Mysella ovalis*. Slightly enlarged.
 8. *Columbella cominellæformis*. Enlarged 2 x.
 9. *Cardita gemmulifera*. Enlarged 2.5 x.
 10. *Lucina perobliqua*. Nat. size.
 11. *Myrina crenatulifera*. Right valve, exterior, enlarged 8 x.
 - 11a. *Myrina crenatulifera*. Right valve, interior, enlarged 8 x.
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